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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO.       |
|--|-------------|----------------------|-------------------------|------------------------|
| 10/764,526   | 01/27/2004  | Martin Rayrole       | Q79576                  | 8985                   |
| 23373 7590 10/15/2007<br>SUGHRUE MION, PLLC<br>2100 PENNSYLVANIA AVENUE, N.W.<br>SUITE 800<br>WASHINGTON, DC 20037 |             |                      | EXAMINER<br>LEE, KWOK W |                        |
|  |             |                      | ART UNIT<br>4113        | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>10/15/2007 | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/764,526             | RAYROLE, MARTIN     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Kwok Wing Lee          | 4113                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

Figure 1 of the drawings is objected to because it is lacking a legend or recognizable symbols that properly identify the items represented in the figure (See MPEP 37 C.F.R 1.84(n)-(o)). Lead lines must originate in the immediate proximity of the reference character and extend to the feature indicated; symbols that do not originate in the immediate proximity of the feature must be placed to their corresponding boxes (See MPEP 37 C.F.R 1.84(q)). Multiple lead lines intersecting box lines make it difficult to recognize corresponding components.

### ***Claim Construction***

In claims 1-12, the schedule to be stored in a "n-ary" tree is nonfunctional descriptive material, in relation to the substrate, because it does not impart functionality when employed as a computer component (See MPEP 2106.01). As a result, the claimed nonfunctional descriptive material will not be given any patentable weight. Any type or form of a schedule was used in construction of these claims.

In claims 6-12, the terms "device" and "arrangement" are construed to mean the same. There is no evidence given in the specification that differentiates the usage of the terms "device" and "arrangement", in the claims.

Claim 12 is construed as being a substitutive duplicate of claim 6 (See 37 C.F.R 1.75(b)).

***Claim Objections***

Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The body of claim 12 does not further limit claim 6.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of the fourth paragraph of 35 U.S.C. 112:

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble, which states a management terminal for a network management system, does not give life and meaning to the claim because there is no reference in the body of the claim that refers to a network management system and will not be given any patentable weight (See MPEP 2111.02). Claim 12 stands as claiming a device or arrangement according to claim 6. Therefore this claim fails to further limit claim 6 and

Art Unit: 4113

to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

***Claim Rejections - 35 USC § 102***

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sayward (US 5,712,712).

With regards to claim 1, Sayward teaches a method of storing a schedule (Column 17, lines 35-43) in the form of a tree known as an "n-ary" tree (Tree 3202, see figure 32), of order n, where n is two or more (See tree 3202 in figure 32), equipped with leaves ( $N_{j4}$ ) (See tree 3203 in figure 32) each corresponding to a secondary period (ST) (Node 1601 in figure 16, where the secondary period is the time it takes to relay data to other nodes) equal to the sum of the time intervals ( $T_j$ ) (The time taken to relay transmission to node 1602 and 1604 in figure 16) represented by all of the leaves that are associated with it, and storing in each node ( $N_{ji}$ ) known as a primary node (Nodes SC, 1, 2, 3, 4, 5, 6, see figure 14), belonging to a set of a minimum number of nodes jointly representing a reservation period, the data representing the maximum reserved resource quantity in the corresponding secondary period (ST) (Column 18, lines 45-63, where each node relays to an "ith" amount of computers to be relayed and in this case, computers are the resources).

With regards to claim 2, Sayward teaches a method according to claim 1, characterized in that said tree is of the binary type ( $n=2$ ) (Tree 3203, see figure 32).

With regards to claim 3, Sayward teaches a method according to claim 1, characterized in that in the event of a request for deletion (Column 22, lines 19-22) of a resource reservation, said stored data, representing the quantities of resource reserved, are updated (Column 22, lines 22-26, where resources are the computers).

With regards to claim 4, Sayward teaches a method according to claim 1, characterized in that said stored data are updated with the passage of time (Column 22, lines 22-26).

With regards to claim 5, Sayward teaches a method according to claim 4, characterized in that said update is performed periodically (Column 22, lines 22-26).

With regards to claim 6, Sayward teaches a device or arrangement characterized in that it includes a memory (Column 5, lines 17-20) suitable for storing said schedule (Column 17, lines 35-43) in the form of so-call "n-ary" tree (Tree 3202, see figure 32), of order n, where n is two or more (See tree 3202 in figure 32), equipped with leaves ( $N_{j4}$ ) (See tree 3203 in figure 32), each representing a time interval ( $T_j$ ) equal to a time granularity (Time to relay to leaf node 1604 from 1601 in figure 16), and of branches growing from nodes ( $N_{ji}$ ) each corresponding to a secondary period (ST) (Node 1601 in figure 16, where the secondary period is the total time it takes to relay data to other nodes) equal to the sum of the time intervals ( $T_j$ ) (The time taken to relay transmission to node 1602 and 1604 in figure 16) represented by all of the leaves that are associated with it, and the processing means (Column 5, lines 17-18) arranged to determine, for each node ( $N_{ji}$ ) known as primary node (Nodes SC, 1, 2, 3, 4, 5, 6, see figure 14), belonging to a set of a minimum number of nodes jointly representing a reservation

Art Unit: 4113

period, the data representing the maximum reserved resource quantity in the corresponding secondary period (ST) (Column 18, lines 45-63, where each node relays to an "ith" amount of computers to be relayed and in this case, computers are the resources), and to send said data to said memory so that they are stored within said n-ary tree (It is inherent that the data in a node, during the creation of the tree, is stored in a memory of the scheduling computer).

With regards to claim 7, Sayward teaches a device or arrangement according to claim 6, characterized in that said tree is of the binary type ( $n=2$ ) (Tree 3203, see figure 32).

With regards to claim 8, Sayward teaches a device or arrangement according to claim 6, characterized in that said processing means (Column 5, lines 17-18) are arranged in such a manner as to deliver the data representing the availability of a resource over a chosen period (Column 16, lines 58-63; the Master Fax Job Scheduling Software to be carried out under CPU, will deliver the data representing the availability of a computer resource over a chosen period it chooses).

With regards to claim 9, Sayward teaches a device or arrangement according to claim 6, characterized in that, in the event of a request for deletion (Column 22, lines 19-22) of a resource reservation, said processing means (Column 5, lines 17-18) are arranged so as to update said data representing the quantities of resource reserved (Column 22, lines 22-26, where resources are the computers), stored in said memory (Column 5, lines 17-20).

Art Unit: 4113

With regards to claim 10, Sayward teaches a device or arrangement according to claim 6, characterized in that said processing means (Column 5, lines 17-18) are arranged so as to update said memory (Column 5, lines 17-20) with the passage of time (Column 22, lines 22-26).

With regards to claim 11, Sayward teaches a device or arrangement according to claim 10, characterized in that said processing means (Column 5, lines 17-18) are arranged to update said memory (Column 5, lines 17-20) periodically (Column 22, lines 22-26).

With regards to claim 12, Sayward teaches a device or arrangement (D) according to claim 6 (See above).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Chishti et al (US 2001/0002310) reference shows using binary tree structures to model teeth movement in orthodontics practice. The Krusche et al (US 5,864,867) reference shows the use of binary tree structures to enable short access time to free memory without negatively influencing data protection and availability. The Steinman (US 5,850,538) reference shows use of binary tree structures for event list management of computer simulations. The Dwyer (US 4,769,772) reference shows use of binary trees to optimize query, updates or transactions operations on a distributed database system.



Art Unit: 4113

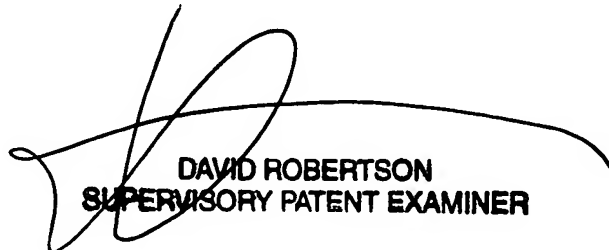
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwok Wing Lee whose telephone number is (571) 270-3557. The examiner can normally be reached on Mon - Thu, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Robertson can be reached on (571) 272-4186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KWL

Kwok W. Lee  
09/19/2007

  
**DAVID ROBERTSON**  
**SUPERVISORY PATENT EXAMINER**